

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

DRAFT MONITORING AND REPORTING PROGRAM NO. R3-2008-0050
Waste Discharge Identification No. 3400302001
Proposed for adoption at the September 5, 2008 Board Meeting

FOR
CITY OF EL PASO DE ROBLES
PASO ROBLES CLASS III LANDFILL
SAN LUIS OBISPO COUNTY

PART I: MONITORING AND OBSERVATION SCHEDULE

Unless otherwise indicated, all monitoring and observations shall be reported as outlined in **Part IV**.

A. SITE INSPECTIONS

The Discharger shall inspect the Paso Robles Class III Landfill (Landfill), in accordance with the following schedule, and record (including photographs, when appropriate) at a minimum, the Standard Observations listed below:

1. Site Inspection Schedule:

- a. During the wet season (**October through May**), following each storm that produces stormwater runoff and discharge, with inspections performed at least monthly.
- b. During the dry season (**June through September**), a minimum of one inspection each **three month period**.

2. Standard Observations

- a. At the Landfill, which includes inspections at the Waste Management Units (WMUs), along the perimeter of the WMUs and the Recycle Area.
 - i. Whether stormwater drainage ditches and stormwater sediment basins contain liquids.
 - ii. Evidence of liquid leaving or entering the Landfill.
 - iii. Evidence of odors.
 - iv. Evidence of ponding over the WMUs.
 - v. Evidence of erosion
 - vi. Evidence of waste in the drainage system (e.g., ditches and stormwater sediment basins).
 - vii. Inspection of stormwater discharge locations for evidence of non-stormwater discharges during dry season.
 - viii. Integrity of drainage systems during wet season.
- b. For Receiving Waters
 - i. Floating and suspended materials of waste origin.
 - ii. Discoloration and turbidity.
 - iii. Evidence of odors.
 - iv. Evidence of beneficial use – presence of water-associated wildlife.
 - v. Flow rate to the receiving water.

B. ADDITIONAL DRAINAGE SYSTEMS INSPECTIONS

1. The Discharger shall inspect all drainage control systems following each runoff-producing storm event and record the following:
 - a. General conditions of the stormwater facilities; and
 - b. Any apparent seepage from the stormwater sediment basins;
 - c. To insure that the terms of the General Permit are properly implemented, document compliance with Storm Water Pollution Prevention Plan;
 - d. Steps taken to correct any problems found during the inspections, as required under Part I of this Monitoring and Reporting Program, and date(s) when corrective action was taken. Include photographic documentation.

C. LEACHATE COLLECTION AND REMOVAL SYSTEMS INSPECTIONS

The Discharger shall inspect all leachate collection and removal systems and record the following information:

1. **Bi-weekly (between October 1 and April 31 of each year)** - leachate containment and collection system integrity, volume of leachate collected (in gallons) and disposal method used.
2. **Monthly (between May 1 and September 30 of each year)** – after emptying the leachate tank by May 1 of each year, leachate containment and collection system integrity, record volume of leachate collected (in gallons) and disposal method used.
3. **Monthly (between October 1 and April 31 of each year)** - pumping system operational check.
4. **Annually** - leachate collection and removal system testing and demonstration, as required by Title 27 20340(d). Report results in the Annual Summary Report required by this Monitoring and Reporting Program, Part IV.B. The Discharger shall develop results of annual testing in a manner that makes one year's test comparable to previous and subsequent test. The absence or presence of biofouling shall be specifically addressed in the Annual Summary Report.
5. All lined Modules will have the location of their respective liners surveyed and markers placed at readily observable locations.

D. RAINFALL DATA

The Discharger shall record the following information from the nearest monitoring station:

1. Total precipitation, in inches, during each **three month period (October through December, January through March, April through June and July through September)**; and.
2. Precipitation, in inches, during the most intense twenty-four hour rainfall event occurring within each contiguous **three-month period (October through December, January through March, April through June and July through September)**.

E. DEWATERED SLUDGE MONITORING

The Discharger shall record the following information for all dewatered sewage and water treatment sludge discharged at the Landfill:

1. Source and type of sludge [e.g., primary (at least 20% solids by weight) or secondary (at least 15% solids by weight) wastewater, water treatment].
2. Volume and weight.
3. Percent moisture.

4. Location where sludge was discharged at the Landfill and the waste solids to sludge ratio (at least 5 to 1 waste to sludge) by weight.

F. ANALYTICAL MONITORING AND MONITORING LOCATIONS

The Discharger shall monitor the Landfill in accordance with the following schedule(s). Monitoring locations are shown on Figure A-1. Discharger shall comply with the sampling, analyses, and reporting requirements discussed in Parts II, III, and IV of this monitoring and reporting program.

1. Semiannual monitoring periods

Samples are to be collected semiannually from the landfill monitoring points during the first quarter (**January 1- March 31**) and third quarter (**July 1-September 30**) of each year. The Discharger shall include the results of the first quarter monitoring event with the first semiannual monitoring report due **April 30**; include results of the third quarter monitoring event in the second semiannual monitoring report due **October 31**. The Annual Report is due **April 30**. See "Monitoring Period" defined under "Definition of Terms."

2. Monitoring Parameters

The Discharger shall analyze all samples from the Monitoring Points specified in this Monitoring and Reporting Program for the Monitoring Parameters listed in **Table 1**, except as footnoted and noted in Section 3.

Table 1 Monitoring Parameters

| Parameter | USEPA Method ¹ | Units |
|--|---------------------------|----------|
| Chloride | 300.0 | mg/L |
| Total Alkalinity | SM 2320B | mg/L |
| Dissolved Oxygen | Field | mg/L |
| Electrical Conductivity ² | Field | µmhos/cm |
| Manganese (dissolved) | 6010B | mg/L |
| Nitrate Nitrogen | 300.0 | mg/L |
| Perchlorate ³ | 314.0 | µg/L |
| pH ² | Field | pH Units |
| Sodium (dissolved) | 6010B | mg/L |
| Sulfate | 300.0 | mg/L |
| Temperature ² | Field | °F/C |
| Total Dissolved Solids | 160.1 | mg/L |
| Total Petroleum Hydrocarbon (using diesel standard) ³ | 8015 CA Modified | mg/L |
| Turbidity ² | Field | NTU |
| VOC _{water} ⁴ | 8260B | µg/L |

Footnotes:

¹ Upon receiving prior acceptance by the Water Board Executive Officer, equivalent analytical method can be used.

² These are field parameters as defined by CCR Title 27 §20415(e) 13. These must be tracked in a summary table in the monitoring report but development of concentration limits per CCR Title 27 §20390 and 20400 et al is not necessary.

- ³ Discharger may request discontinuing analysis if this parameter is not detected in at least three consecutive monitoring events.
- ⁴ The VOC_{water} Monitoring Parameter includes all Volatile Organic Compounds (VOCs) detectable using USEPA Method 8260B, including at least all 47 organic constituents listed in Appendix I to 40 CFR, 258 (Subtitle D), MTBE and all unidentified peaks.

3. Description of Monitoring Points

- a. **Groundwater:** Groundwater Detection Monitoring Points (hereafter "DMP") for this Landfill are described as follows (see Figure A-1):
- Well MW-3, MW-9 and MW-11 shall serve as DMPs. MW-3 and MW-8 have been dry since 2005 such that there is a data gap on the west side of the Landfill where these wells are located. However, recently installed MW-11 serves to replace the data gap at MW-8.
 - Well MW-2 shall serve as a background monitoring point.
 - Monitoring Point MW-7 has been dry since constructed, so is not included as a Monitoring Point.
 - Monitoring Points MW-V4, V5, and V10 are screened in first encountered perched groundwater and are included as Monitoring Points.
- b. **Vadose Zone:** The Discharger shall monitor the vadose zone using Lysimeters LS-V1 through LS-V6 (see Figure A-1 for locations).
- c. **Surface Water:** Collect samples from a point prior to discharge into the unnamed tributaries (see Figure A-1) from the stormwater sediment basins. See Provision F.6 below for description of monitoring parameters.
- d. **Landfill Gas:** Landfill gas monitoring is to be done from gas monitoring probes GP-1 through GP-5 and GP-7 and GP-8. See Provision F.7 below for landfill gas monitoring period and monitoring parameters. Annually, the Discharger shall collect a sample of gas condensate from the collection tank and analyze the sample for VOCs using EPA Method 8260B.
- e. **Landfill Leachate:** The discharger shall collect samples from each leachate collection tank.

4. Monitoring Frequency

Conduct sampling and analyses of all DMP and monitoring wells at least once during each monitoring period listed in **Table 2**.

Table 2 Monitoring Points and Monitoring Periods ^(a)

| Detection Monitoring Point | Monitoring Purpose | | | Monitoring Periods ^(d) | |
|---|-----------------------|-----------------------------|---------------------|-----------------------------------|-----------|
| DMP No. | Monitoring Parameters | Water Levels ^(b) | COCs ^(c) | Frequency | Five Year |
| MW-2 | X | X | X | Semiannual | X |
| MW-3 | X | X | X | Semiannual | X |
| MW-V4 | X | X | X | Semiannual | X |
| MW-V5 | X | X | X | Semiannual | X |
| MW-8 | X | X | X | Semiannual | X |
| MW-9 | X | X | X | Semiannual | X |
| MW-V10 | X | X | X | Semiannual | X |
| MW-11 | X | X | X | Semiannual | X |
| Landfill Production Well ^(e) | X | X | X | Semiannual | X |
| LS-V1 | X | | X | Semiannual | X |
| LS-V2 | X | | X | Semiannual | X |
| LS-V3 | X | | X | Semiannual | X |
| LS-V4 | X | | X | Semiannual | X |
| LS-V5 | X | | X | Semiannual | X |
| LS-V6 | X | | X | Semiannual | X |
| Leachate | X | | X | Annual | X |

| Detection Monitoring Point | Monitoring Purpose | | | Monitoring Periods ^(d) | |
|----------------------------|-----------------------|-----------------------------|---------------------|-----------------------------------|-----------|
| DMP No. | Monitoring Parameters | Water Levels ^(b) | COCs ^(c) | Frequency | Five Year |
| Stormwater ^(f) | | | | Annual | |

Footnotes on next page

Footnotes for Table 2:

- For all **new** Monitoring Points, quarterly monitoring shall be preformed for four consecutive quarters starting from the date first sampled. After completing the initial quarterly samples, monitor semiannually, except as provided under Part III C.
- Water Levels must be measured semiannually as follows: Winter (January 1 to March 31) and Summer (July 1 to September 30). Include the water level measurements in the immediately subsequent semiannual report.
- COCs are sampled once every five years as discussed in Part I F.5, except as provided under Part III C.
- See "Monitoring Period" under Part V-Definition of Terms, except as provided under Part III C.
- Monitor only if there is a detection of any Monitoring Parameters or COCs in excess of background or Concentration Limits in any of the other Monitoring Points.
- Collected and analyze samples as specified Part I F.6 of this Monitoring and Reporting Program.

5. Constituents of Concern Monitoring

Constituents of Concern (COC) are listed in **Table 3**, and either directly include or include by reference all constituents listed in Appendix II in 40 CFR, Part 258. The Discharger shall collect and analyze samples for COCs **once every five years** at each of the site's detection monitoring points. If there is an indication of release (**Part IV.C.4**) monitoring for COCs is also required. The Discharger shall monitor for COCs in the spring of one year and the fall of the fifth year, **beginning in March 2002**. Within three months of installing a DMP, the Discharger shall collect and analyze samples for COCs from that DMP.

Table 3 Constituents of Concern ⁽¹⁾

| CONSTITUENTS | USEPA METHOD | UNITS |
|--------------------------|--------------|-------|
| Antimony | 6010B | mg/L |
| Arsenic | 7060 | mg/L |
| Barium | 6010B | mg/L |
| Beryllium | 6010B | mg/L |
| Cadmium | 6010B | mg/L |
| Chromium | 6010B | mg/L |
| Cobalt | 6010B | mg/L |
| Copper | 6010B | mg/L |
| Cyanide | 9010 | mg/L |
| Lead | 7421 | mg/L |
| Mercury | 7470 | mg/L |
| Nickel | 6010B | mg/L |
| Selenium | 7740 | mg/L |
| Silver | 6010B | mg/L |
| Sulfide | 9030 | mg/L |
| Thallium | 7841 | mg/L |
| Tin | 6010B | mg/L |
| Vanadium | 6010B | mg/L |
| Zinc | 6010B | mg/L |
| Chlorophenoxy Herbicides | 8150 | µg/L |
| Nonhalogenated Volatiles | 8015 | µg/L |

| | | |
|------------------------------------|-------|------|
| Organochlorine Pesticides and PCBs | 8080 | µg/L |
| Organophosphorous Pesticides | 8041A | µg/L |
| Chlorinated Herbicides | 8151A | µg/L |
| Phthalate Esters | 8060 | µg/L |
| Phenols | 8040 | µg/L |
| Semi-Volatile Organic Compounds | 8270C | µg/L |
| Volatile Organic Compounds | 8260B | µg/L |

(1) The Discharger shall analyze for all constituents using the USEPA analytical methods indicated above, including MTBE and all constituents listed in Appendix II to 40 CFR, Part 258 (Subtitle D).

6. Surface Water Monitoring

Annually, collect two stormwater samples pursuant to State Water Board Order No. 97-03-DWQ, General Permit No. CAS000001, as follows:

- Within one hour of the first storm event of the wet season (October 1 through April 30).
- During at least one other storm event of the wet season.

A storm event is an event that produces discharge from the sediment retention basin(s). Collect (unfiltered) samples when there is a discharge from the stormwater sediment basins at the locations specified under Part I F.3.c of this Monitoring and Reporting Program. Collect samples within the one hour specified using automatic stormwater sampling devices located at each point of discharge from the stormwater sediment basins into the unnamed tributary (Figure A-1). The Discharger shall retrieve the sample collected by the stormwater sampling device:

- Within 30-days of the first storm event that causes a discharge from the stormwater sediment basins; or,
- Within the time period necessary to analyze the constituents specified under Table 4 of this Monitoring and Reporting Program, whichever is sooner.

Table 4 Stormwater Monitoring Parameters

| Parameter | USEPA Method | Units |
|--|----------------|----------|
| Specific Conductance | 120.1 | µS/cm |
| Nitrate Nitrogen | 300.0 | mg/L |
| pH | Field | pH Units |
| Total Dissolved Solids | 160.1 | mg/L |
| Total Organic Carbon (or Oil and Grease) | 9060 (or 1664) | mg/L |
| Total Suspended Solids | 160.2 | mg/L |
| Nickel | 6010B | mg/L |
| Zinc | 6010B | mg/L |
| Cadmium | 6010B | mg/L |

Annually, collect a sediment sample from within each of the stormwater sediment basins, and analyze for the metals listed in §64431, CCR Title 22, Division 4, Chapter 15, Article 4.

Sediment sampling is not required if each basins' accumulated sediments are removed prior to October 1 of each year and discharged into the Landfill's lined Waste Management Units.

7. Landfill Gas Collection System

Monitor gas monitoring probes GP-1 through GP-5, and GP-7 and GP-8 (all levels) semiannually for methane, carbon dioxide, oxygen and volatile organic constituents. Test for volatile organic compounds annually using method TO-14 (or equivalent). Submit monitoring results to the Board in semiannual reports and include information specified in Title 27, §20934.

8. Groundwater Flow Rate and Direction

The Discharger shall measure the water level in each DMP groundwater well at least semiannually as indicated in Table 2, including the times of expected highest and lowest elevations of the water level. The Discharger shall also determine horizontal and vertical gradients, groundwater flow rate, and flow direction for the respective groundwater body.

9. Sample Procurement Limitation

For any given monitored medium, the Discharger shall collect samples from Monitoring Points within a span not exceeding 30 days within a given Monitoring Period; collect samples in a manner that ensures sample independence to the greatest extent feasible.

PART II: SAMPLE COLLECTION AND ANALYSIS

A. SAMPLING AND ANALYTICAL METHODS

The Discharger shall collect, store, and analyze samples according to the most recent version of Standard U.S. Environmental Protection Agency (USEPA) methods (USEPA publication "SW-846"), and in accordance with a sampling and analysis plan approved by the Water Board's Executive Officer. A laboratory certified for these analyses by the State of California Environmental Laboratory Program shall perform all water analyses and they must identify specific methods of analysis. The director of the laboratory whose name appears in the certification shall supervise all analytical work in his/her laboratory and shall sign reports of such work submitted to the Water Board. In addition, the Discharger is responsible for seeing that the laboratory analysis of samples from Monitoring Points meets the following restrictions:

1. The methods of analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., trace) in historical data for that medium, the analytical method having the lowest Method Detection Limit (MDL) shall be selected.
2. Trace results (results falling between the MDL and the Practical Quantitation Limit) shall be reported as such.
3. MDLs and Practical Quantitation Limits (PQLs) shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits are defined in Part V and shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. If the laboratory suspects that, due to a change in matrix or their effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived values, the results shall be flagged accordingly, and an estimate of the limit actually achieved shall be included.
4. Report Quality Assurance and Quality Control (QA/QC) data along with the sample results to which

it applies. Also report sample results that are unadjusted for blank results or spike recovery. The QA/QC data submittal shall include:

- a. Method, equipment, and analytical detection limits;
 - b. Recovery rates, an explanation for any recovery rate that is outside the USEPA-specified recovery rate;
 - c. Results of equipment and method blanks;
 - d. Results of spiked and surrogate samples;
 - e. Frequency of quality control analysis;
 - f. Chain of custody logs, and;
 - g. Name and qualifications of the person(s) performing the analyses.
5. Report and flag (for easy reference) QA/QC analytical results involving detection of common laboratory contaminants in associated samples.
 6. Identify, quantify, and report, to a reasonable extent, non-targeted chromatographic peaks. Perform second column or second method confirmation procedures when significant unknown peaks are encountered in attempt to identify and more accurately quantify the unknown analyte(s).

B. CONCENTRATION LIMIT DETERMINATION

1. For the purpose of establishing Concentration Limits for COC and Monitoring Parameters detected in greater than ten percent of a medium's samples the Discharger shall:
 - a. Statistically analyze existing monitoring data (Part III), and propose, to the Executive Officer, statistically derived Concentration Limits for each COC and each Monitoring Parameter at each Monitoring Point for which sufficient data exist;
 - b. In cases where sufficient data for statistically determining Concentration Limits do not exist the Discharger shall collect samples and analyze for COC and Monitoring Parameter(s) which require additional data. Once sufficient data are obtained the Discharger shall submit proposed Concentration Limit(s) to the Executive Officer for approval. This procedure shall take no longer than two calendar years;
 - c. Sample and analyze new Monitoring Points, including any added by this Order, until sufficient data are available to establish a proposed Concentration Limit for all COC and Monitoring Parameters. Once sufficient data are obtained the Discharger shall submit the proposed Concentration Limit(s) to the Executive Officer for approval. This procedure shall take no longer than two calendar years.
2. Once established, review concentration limits a minimum of annually. Propose new concentration limits, when appropriate.

C. RECORD MAINTENANCE

The Discharger shall maintain records in accordance with CCR Title 27 §21720(f) and 40 CFR 258.29, including maintenance and retention of analytical records for a minimum of five years by the Discharger or laboratory. The Discharger shall extend the period of retention during the course of any unresolved litigation or when requested by the Executive Officer. Such records shall show the following of each sample:

1. Identification of sample, Monitoring Point from which sample was taken, and individual who obtained the sample;
2. Date and time of sampling;
3. Date and time that analyses were started and completed, and the name of personnel performing each analysis;

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;
5. Results of analyses, and MDL and PQL for each analysis; and
6. A complete chain of custody log.

PART III: STATISTICAL AND NON-STATISTICAL ANALYSIS OF DATA

A. STATISTICAL ANALYSIS

For Detection Monitoring, the Discharger shall use statistical methods to analyze COC and Monitoring Parameters that exhibit concentrations that equal or exceed their respective MDL in at least ten percent of applicable historical samples. The Discharger may propose and use any statistical method that meets the requirements of California Code of Regulations, Title 27, §20415(e)(7). All statistical methods and programs proposed by the Discharger are subject to Executive Officer approval.

B. NON-STATISTICAL METHOD

For Detection Monitoring, the Discharger shall use the following non-statistical method for analyzing constituents which are detected in less than 10% of applicable historical samples. This method involves a two-step process:

1. For constituents to which the method applies, compile a specific list of those constituents, which exceed their respective MDL. The list shall be compiled based on either data from the single sample or in cases of multiple independent samples, from the sample, which contains the largest number of constituents.
2. Evaluate whether the listed constituents meet either of two possible triggering conditions. Either the list from a single well contains two or more constituents, or contains one constituent, which equals or exceeds its PQL. If either condition is met, the Discharger shall conclude that a release is tentatively indicated and shall immediately implement the appropriate re-test procedure under Part III.C.

C. RE-TEST PROCEDURE

1. In the event that the Discharger concludes that a release has been tentatively indicated, the Discharger shall carry out the reporting requirements of Part IV.C.2 and, within 30 days of receipt of analytical results, collect two new suites of samples for the indicated COC or Monitoring Parameter(s) at each indicating Monitoring Point, collecting at least as many samples per Monitoring Point as were used for the initial test.
2. Analyze each of the two suites of re-test analytical results using the same statistical method (or non-statistical comparison) that provided the tentative indication of a release. If the test results of either (or both) of the re-tested data suites confirm the original indication, the Discharger shall conclude that a release has been discovered and shall carry out the requirements of Part IV.C.
3. Re-tests shall be carried out only for the Monitoring Point(s) for which a release is tentatively indicated, and only for the COC or Monitoring Parameter(s) which triggered the indication. When an analyte of the VOC composite parameter is re-tested, report the results of the entire VOC composite.

PART IV: REPORTING**A. MONITORING REPORT**

The Discharger shall submit a written Monitoring Report semiannually by **April 30 and October 31** of each year. Submit the Monitoring Reports in an electronic format, with text, tables, figures, laboratory analytical data, and appendices placed on a compact disc in PDF format along with a hardcopy of text, tables, and figures. The electronic format must be compatible with Geotracker, as stipulated by California State law. Accompanying the electronic version of the report will be a hard copy transmittal letter, with signatures of preparers and submitters (in accordance with requirements stated in Waste Discharge Requirements Order No. R3-2008-0050), along with an executive summary of the report text. In addition, post the complete monitoring report in Geotracker. The Monitoring Report shall address all facts of the landfill's monitoring. Reports shall include, but should not be limited to, the following:

1. Letter of Transmittal

A letter transmitting the essential points shall accompany each report. The letter shall include a discussion of violations caused by the Landfill since submittal of the last such report. If the Discharger has not observed any new violations since the last submittal, the Discharger shall state this in the transmittal letter. Both the Monitoring Report and the transmittal letter shall be signed by: for private facilities, a principal executive officer at the level of vice president; for public agencies, the director of the agency. Upon Water Board Executive Officer approval, the cited signature can be by a California Registered Civil Engineer or Certified Engineering Geologist who has been given signing authority by the cited signatories. The transmittal letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

2. Compliance Summary

The Summary shall contain at least:

- a. Discussion of compliance with concentration limits. Release indications and any corrective actions taken.
- b. For each monitored groundwater body, calculate groundwater velocity and, based upon water level elevations taken during the Monitoring Period, graphically present groundwater flow direction under and around the Landfill.

3. Graphical Presentation of Data

For each Monitoring Point in each medium, submit, in graphical format, the complete history of laboratory analytical data. Graphs shall effectively illustrate trends and/or variations in the laboratory analytical data. Each graph shall plot a single constituent concentration over time at one (for intra-well comparison) or more (for inter-well comparisons) monitoring points in a single medium. Where applicable, include Maximum Contaminant Levels (MCLs) and/or concentration limits along with graphs of constituent concentrations. When multiple samples are taken, graphs shall plot each datum, rather than plotting mean values.

The Discharger shall also determine horizontal gradients, groundwater flow rate, and flow direction for each respective groundwater body. Present this data on a figure that depicts groundwater contours and flow directions as well as gradient. Include one figure for each water level measuring period with the semiannual monitoring report.

4. Corrective Action Summary

Discuss significant aspects of any corrective action measures conducted during the Monitoring Period and the status of any ongoing corrective action efforts, including constituent trend analysis. Calculate pollutant load removed from the sites impacted media by mass (water, gas, leachate) removal system(s). Base the mass removal calculations on actual analytical data as required by Part I.E. Present discussion and indications, relating mass removal data to the violation the corrective action is addressing.

5. Laboratory Results

Summarize and report laboratory results and statements demonstrating compliance with Part II. Include results of analyses performed at the landfill that are outside of the requirements of this Monitoring and Reporting Program.

6. Sampling Summary

- a. For each Monitoring Point addressed by the report, a description of: 1) the method and time of water level measurement; 2) the method of purging and purge rate and well recovery time; and 3) field parameter readings.
- b. For each Monitoring Point addressed by the report, a description of the type of sampling device used, its placement for sampling, and a description of the sampling procedure (number of samples, field blanks, travel blanks, and duplicate samples taken; the date and time of sampling; the name and qualification of the person actually taking the samples; description of any anomalies).

7. Leachate Collection and Detection Systems

A summary of the total volume of leachate collected each month since the previous Monitoring Report for both the leachate collection and leachate detection systems. Also include fluid level measurements in LCRS along with transducer calibration records. Tabulate and graph the LCRS fluid level measurements and fluid volumes in the semiannual reports.

8. Standard Observations

A summary of Standard Observations (Part V) made during the Monitoring Period.

9. Map(s)

The base map for the Monitoring Report shall consist of a current aerial photograph or include relative topographical features, along with Monitoring Points and features of the landfill facility.

B. ANNUAL SUMMARY REPORT

The Discharger shall submit an annual report to the Water Board covering the previous monitoring year. The annual Monitoring Period ends on December 31 each year. Submit this Annual Summary Report no later than April 30 of each year. Optionally combine with the Second Semiannual Monitoring Report of the year. The annual report must include the information outlined above and the following;

1. Discussion

Include a comprehensive discussion of the compliance record, a review of the past year's significant monitoring system and operational changes, a summary of corrective action results and milestones, and a review of construction projects, with water quality significance, completed or commenced in the past year or planned for the up-coming year.

2. Statistical Limit Review

The Discharger shall review the statistically derived concentration limits a minimum of annually and revise them as necessary. Discuss data collected during the past year and consider for inclusion in, and determination of, proposed limits for the coming year. For statistical limits that are changed from the previous year, include a comprehensive discussion of the proposed limit for Executive Officer review and consideration.

3. Analytical Data

Complete historical analytical data presented in a tabular form and on compact disk, and Excel™ format or in another file format acceptable to the Executive Officer.

4. Leachate Collection and Detection System

Results of annual leachate collection and leachate detection system testing, as required by Part I.F. Submit annually testing that shows the leachate is non-hazardous, if leachate is used for dust control.

5. Map(s)

A map, or set of maps, that indicate(s) the type of cover material in place (final, long-term intermediate, or intermediate) over inactive and completed areas.

C. CONTINGENCY RESPONSE1. Leachate Seep

The Discharger shall, within 24 hours, report by telephone concerning the discovery of previously unreported seepage from the disposal area. File a written report with the Water Board within seven days, containing at least the following information:

- a. A map showing the location(s) of seepage along with photographic documentation;
- b. An estimate of the flow rate;
- c. Location of sample(s) collected for laboratory analysis, as appropriate;
- d. A description of the nature of the discharge (e.g. pertinent observations and analysis); and
- e. A summary of corrective measures both taken and proposed.

2. Initial Release Indication Response

Should the initial statistical or non-statistical comparison (under Part III. A or B) indicate that a new release is tentatively identified, the Discharger shall:

- a. Within 24 hours, notify the Water Board verbally or by email as to the Monitoring Point(s) and constituent(s) or parameter(s) involved;
- b. Provide written notification by certified mail within seven days of such determination; and,
- c. Either of the following:
 - i. Shall carry out a discrete re-test in accordance with Part III.C. If the re-test confirms the existence of a release or the Discharger fails to perform the re-test, the Discharger shall carry out the requirements of Part IV.C.4. In any case, the Discharger shall inform the Water Board of the re-test outcome within 24 hours of results becoming available, following up with written results submitted by certified mail within seven days, or;
 - ii. Make a determination, in accordance with Title 27, §20420(k)(7), that a source other than the waste management unit caused the release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in the groundwater, surface water, or the unsaturated zone.

3. Physical Evidence of a Release

If either the Discharger or the Executive Officer determines that there is significant physical evidence of a new release pursuant to Title 27, §20385(a)(3), the Discharger shall conclude that a release has been discovered and shall:

- a. Within seven days notify the Executive Officer of this fact by certified mail (or acknowledge the Executive Officer's determination);
- b. Carry out the requirements of Part IV.C.4. for potentially-affected medium; and
- c. Carry out any additional investigations stipulated in writing by the Executive Officer for the purpose of identifying the cause of the indication.

4. Release Discovery Response

If the Discharger concludes that a new release has been discovered the following steps shall be carried out:

- a. If this conclusion is not based upon monitoring for COC, the Discharger shall sample for COC at Monitoring Points in the affected medium. Within seven days of receiving the laboratory analytical results, the Discharger shall notify the Executive Officer, by certified mail, of the

- concentration of COC at each Monitoring Point. This notification shall include a synopsis showing, for each Monitoring Point, those constituents that exhibit an unusually high concentration;
- b. The Discharger shall, within 90 days of discovering the release, submit to the Executive Officer a Revised Report of Waste Discharge proposing an Evaluation Monitoring and Reporting Program that:
 - (1) meets the requirements of Title 27, §20420 and §20425; and
 - (2) satisfies the requirements of 40 CFR §258.55(g)(1)(ii) by committing to install at least one monitoring well directly down-gradient of the center of the release;
 - c. The Discharger shall, within 180 days of discovering the release, submit to the Executive Officer a preliminary engineering feasibility, study meeting the requirements of Title 27, §20420; and
 - d. The Discharger shall immediately begin delineating the nature and extent of the release by installing and monitoring assessment wells as necessary to assure that the Discharger can meet the requirements of Title 27, §20425 to submit a delineation report within 90 days of when the Executive Officer directs the Discharger to begin the Evaluation Monitoring Program.
5. Release Beyond Facility Boundary
Any time the Discharger or the Executive Officer concludes that a release from the Landfill has proceeded beyond the facility boundary, the Discharger shall notify persons who either own or reside upon the land that directly overlies any part of the plume and are immediately downgradient of the plume (Affected Persons).
- a. Initial notification to Affected Persons shall be accomplished within 14 days of making this conclusion and shall include a description of the Discharger's current knowledge of the nature and extent of the release.
 - b. Subsequent to initial notification, the Discharger shall provide updates to Affected Persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.
 - c. Each time the Discharger sends a notification to Affected Persons (under a. or b. above), the Discharger shall, within seven days of sending such notification, provide the Executive Officer with both a copy of the notification and a current mailing list of Affected Persons.

PART V: DEFINITION OF TERMS

A. AFFECTED PERSONS

Individuals who either own or reside upon the land which directly overlies any part of that portion of a gas or liquid phase release that may have migrated beyond the facility boundary.

B. CONCENTRATION LIMITS

The Concentration Limit for any given COC or Monitoring Parameter in a given monitored medium shall be either:

- 1. The constituent's statistically determined background value or interval limit, established using an Executive Officer approved method (Part III); or
- 2. In cases where the constituent's MDL is exceeded in less than 10% of historical samples, the MDL is the concentration limit defined in **Part II. A.1.**

C. CONSTITUENTS OF CONCERN (COC)

An extensive list of constituents likely to be present in a typical municipal solid waste landfill. The COC for this landfill are listed in **Table 3.**

D. MATRIX EFFECT

Any increase in the MDL or PQL for a given constituent as a result of the presence of other constituents, either of natural origin or introduced through a release, that are present in the sample being analyzed.

E. METHOD DETECTION LIMIT (MDL)

The lowest concentration at which a given laboratory, using a given analytical method to detect a given constituent, can differentiate with 99% reliability, between a sample which contains the constituent and one which does not. The MDL shall reflect the detection capabilities of the specific analytical procedure and equipment used by the laboratory.

F. MONITORED MEDIUM

Those media that are monitored pursuant to this Monitoring and Reporting Program (groundwater, surface water, liquid, leachate, gas condensate, and other as specified).

G. MONITORING PARAMETERS

A short list of constituents and parameters used for the majority of monitoring activities. The Monitoring Parameters for this Landfill are listed in **Part I. E.**

H. MONITORING PERIOD (frequency)

The duration of time, during which a sampling event must occur. The Monitoring Period for the various media and programs is specified in **Part I.E.** The due date for any given report will be 30 days after the end of its Monitoring Period, unless otherwise stated.

I. PRACTICAL QUANTITATION LIMIT (PQL)

The lowest acceptable calibration standard (acceptable as defined for a linear response or by actual curve fitting) times the sample extract dilution factor times any additional factors to account for Matrix Effect. The PQL shall reflect the quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. PQLs reported by the laboratory shall not simply be restated from USEPA analytical method manuals. Laboratory derived PQLs are expected to closely agree with published USEPA estimated quantitation limits (EQL).

J. RECEIVING WATERS

Any surface water, which actually or potentially receives surface or groundwater, which pass over, through, or under waste materials or contaminated soils.

K. STANDARD OBSERVATIONS

1. For Receiving Waters:
 - a. Floating and suspended materials of waste origin;
 - b. Discoloration and turbidity;
 - c. Evidence of odors;
 - d. Evidence of beneficial use – presence of water-associated wildlife; and
 - e. Flow rate to the receiving water.
2. Along the perimeter of the Landfill:
 - a. Evidence of liquid leaving or entering the Landfill;
 - b. Evidence of odors;
 - c. Evidence of erosion and/or exposed refuse; and
 - d. Inspection of stormwater discharge locations for evidence of non-storm water discharges during dry season, and integrity during wet season.
3. For the Unit:
 - a. Evidence of ponded water at any point on the waste management facility;
 - b. Evidence of odors;
 - c. Evidence of erosion and/or daylighted refuse;
 - d. Compliance with Storm Water Pollution Prevention Plan, insuring that the terms of the General Permit are properly implemented;
 - e. Integrity of containment and drainage systems; and
 - f. Evidence of waste in the drainage system (e.g., ditches and sediment basins)

L. VOLATILE ORGANIC COMPOUND (VOC) COMPOSITE MONITORING PARAMETER (VOC

composite)

VOC composite is a composite parameter that encompasses a variety of VOCs. The constituents addressed by the VOC composite Monitoring Parameter includes all VOCs detectable using USEPA Methods 8260B (water) and TO-14 (gas) or equivalent.

ORDERED BY: _____
Executive Officer

Date

Figure: Figure A-1 Monitoring Point Location Map

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